

AMENDMENT TO THE CLAIMS

7. (currently amended) A containers/vehicles inspection system with adjustable radiation X-ray angle, comprising:

an inspection passage;

a pulling vehicle for carrying the containers/vehicles to be inspected to pass through said inspection passage;

an accelerator for emitting X-ray; and

an accelerator rack for bearing said accelerator;

wherein said ~~an~~ accelerator rack is composed of

a rack including

a base;

a vertical arm vertically connected to the base;

a bending framework vertically connected to said vertical arm; and

a cantilever connected under said bending framework;

a rotary adjustment mechanism arranged between the horizontal end of said bending framework and said cantilever so as to make said cantilever rotate horizontally;  
and

a pitching adjustment mechanism provided at the bottom end of said cantilever; said accelerator is hinged with the pitching adjustment mechanism at the coaxial intersection of the cantilever and the pitching adjustment mechanism through a hinging shaft and provided over the base so as to make vertical pitching movements.

8. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to claim 7, wherein, said accelerator rack further comprises the horizontal regulation mechanism, which is connected to said base, for moving the base forward and afterward horizontally.

9. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to claim 8, wherein, said horizontal regulation mechanism is composed of:

- a horizontal guide rail;
- a fifth driving device mounted at the bottom end of said base;
- a fifth screw mounted in said base and connected to a rotary shaft of the fifth driving device; and
- a fifth nut base (54), which is installed in said horizontal guide rail and threadedly connected with said fifth screw so as to through the thread set, make said base move forward and afterward along said horizontal guide rail.

10. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to any one of claim 7, wherein, said accelerator rack further comprises a vertical regulation mechanism, which is provided in the vertical arm, for moving the bending framework up and down vertically.

11. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to claim 10, wherein: said vertical regulation mechanism is composed of:

- a vertical guide rail;
- a fourth driving device connected to a pinion;
- a gearwheel for engaging with the pinion so as to form a reducer, both of which are installed on the upper top surface of said vertical arm;
- a fourth screw provided in said vertical arm and connected to a driving shaft of the gearwheel; and
- a fourth nut base, which is provided in the side arm of said bending framework and threadedly connected with the fourth screw so as to through the thread set, make said bending framework move up and down along said vertical guide rail.

12. (previously presented) The containers/vehicles inspection system with adjustable radiation X-

ray angle according to claim 7, wherein, said rotary regulation mechanism is composed of:

- a third driving device provided on a horizontal end of said bending framework;
- a gear provided on the driving shaft of said third driving device; and
- a rotary support, of which an inner tooth ring engages with said gear and is connected to said cantilever, and a outer ring of which is connected to the lower end surface of said bending framework; thus said cantilever can be rotated through the inner tooth ring of said rotary support engaging with the gear.

13. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to claim 7, wherein, said pitching regulation mechanism is composed of:

- a second driving device;
- a worm connected to said second driving device;
- a worm wheel engaged with said worm; and
- an accelerator support rack connected with a rotary shaft of said worm wheel, on which the second driving device is provided, for supporting the second handwheel and realizing the change in sector elevation angle of main X-ray beam produced by said accelerator through the worm and worm wheel set.

14. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to any one of claim 7, wherein, a detector arm rack equipped with detectors and the second collimator is provided in said inspection passage; the X-ray produced by the accelerator is right opposite to the calibrator and the first collimator both which are arranged in order, and said first collimator is right opposite to said second collimator, so that the conical X-ray produced by said accelerator, after regulated into a sector shape, passes through the articles to be inspected and then is received by the detectors in the detector arm rack.

15. (previously presented) The containers/vehicles inspection system with adjustable radiation X-ray angle according to claim 14, wherein, said detector arm rack is in the mode of a bending beam

or a combination mode of horizontal beam with vertical beam.

16. (currently amended) The containers/vehicles inspection system with adjustable radiation X-ray angle according claim 14, wherein, a detector arm rack equipped with the detectors and the second collimator is provided in said inspection passage; the X-ray produced by the accelerator is right opposite to the calibrator and the first collimator both which are arranged in order, and said first collimator is right opposite to said second collimator, so that the conical X-ray produced by said accelerator, after regulated into a sector shape, passes through the articles to be inspected and then is received by the detectors in the detector arm rack.